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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,002	08/21/2001	Tae-Pok Rhee	5484-92	9272

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PORTLAND, OR 97205

EXAMINER

TSAI, H JEY

ART UNIT	PAPER NUMBER
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2812

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,002

Applicant(s)

RHEE

Examiner

H.Jey Tsai

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2003 and 09 June 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 17-24 and 41-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 25-40 and 49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/974,371.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) 9.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16, 25-40 and 49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sundaram et al. 5,372,967 in view of Yamada et al. 6,236,538.

The reference(s) teach the features :

Sundaram et al. substantially discloses a method of forming an inductor on the semiconductor device, which includes :

forming a groove with a spiral shape or other shapes in the insulating layer 11, fig. 4+,

forming a conductive layer 18 on the groove,

forming cylindrical insulator 19, col. 3, lines 18+,

forming upper conductive lines 23 contacting the underlying conductive layer 18 to form an inductor, figures 5 and 6.

Yamada et al. teaches forming an inductor in the semicircle grooves in figures 35 and 36 in the insulating layer 1a, 1b, or 41 (since substrate 1 is semicircle, hence, layer 41 inherently a semicircle), a conductive layer 21 and an inductor core 31 and upper conductive line 22 to form an inductor, see col. 25, lines 15+ and figures 1+.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have recognized that Sundaram et al's spiral shape groove is a semicircle groove in the insulating layer as suggested by Yamada et al.

Applicant's arguments filed on June 9, 2003 have been fully considered but they are not persuasive.

Applicant contends that Sundaram et al. fail to teach a cylindrical insulator. This is not found to be persuasive because Sundaram et al. clearly teaches **forming cylindrical insulator 19, col. 3, lines 18+ and fig. 5** as set forth in the last office action. And, Sundaram also teaches the groove is a spiral shape, hence, from figs. 4-5, the groove is a semicircle with an cylindrical insulator formed inside. Yamada also teaches a semicircle groove in figs. 35A and 35B with insulator inductor core 1a, 1b or 41 formed inside.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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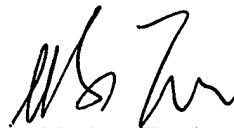
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry of a general nature or clerical matters or relating to the status of this application or proceeding should be directed to the Group customer service whose telephone number is (703) 306-3329 and Fax number (703) 308-7722. Group receptionist telephone number 703-308-0956.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. Jey Tsai whose telephone number is (703) 308-1374. The examiner can normally be reached on from 7:00 Am to 4:00 Pm., Monday thru Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on (703) 308-3325. The fax phone number for this Group is (703) 305-3431.

hjt

8/20/03



H. Jey Tsai
Primary Examiner
Patent Examining Group 2800